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HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE, SUITE 140
TUCSON, AZ 85718

EXAMINER	
BARTON, JEFFREY THOMAS	

ART UNIT	PAPER NUMBER
1795	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/786,279	BANISTER, MARK	
	Examiner	Art Unit	
	Jeffrey T. Barton	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-11,14-33 and 36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-11,14-33 and 36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 8 August 2008 does not place the application in condition for allowance.

Status of Rejections Pending Since the Office Action of 17 July 2008

2. All rejections are withdrawn due to Applicant's amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1, 5-11, 14-33, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murasko et al (US 2002/0159245; hereinafter Murasko '245) in view

of Yamamura (JP 62-106671 with English Abstract), Murasko (US 2001/0035716; hereinafter Murasko '716) and Curtin. (US 6,160,215)

Regarding claim 1, Murasko '245 teaches a fully contained solar powered laminated electrical tape illuminated device comprising stacked layers including a substrate 202 that can be glass or plastic; a photocell 208 (i.e., a photovoltaic that is illuminated by the sun); a device 204, such as a thin film battery, for storing electricity produced by the photocell 208; a source of illumination 206; electrical circuitry 214 for connecting the components; and, as a protective surface, a light transmissive, electrically insulating material (see paragraphs 0023 to 0025). This laminated system reads on a "tape" in that Murasko '245 discloses adhesive backing for these devices. (Paragraph 0028) Murasko '245 also discloses a flexible base sealing layer. (Paragraphs 0025 and 0026; plastic or cardboard) Note also that Murasko '245 teaches that the electroluminescent devices of Murasko '716 are suitable for use within their devices. (Paragraph 0030)

Regarding claim 6, the substrate of Murasko '245 inherently has a finite thermal conductivity, and will dissipate heat at a corresponding rate. The structure inherently meets the limitations of this claim.

Regarding claims 7-9, Murasko '245 discloses light-sensing switches (Paragraph 0027), which sense ambient light levels, and actuate a switch operable to turn the lamp on or off. Such switches read on the claims.

Regarding claim 11, it is the Examiner's position that the electrical circuitry in the device of Murasko '245 inherently prevents electric current drain through the photocell.

Regarding claim 14, Murasko '245 discloses a transparent front electrode of the EL lamp. (Paragraph 0027)

Regarding claim 15, Murasko '245 discloses transparent non-electrical layers. (Paragraph 0025, "light-transmissive" coatings)

Regarding claim 17, the electroluminescent lamp of Murasko '245 emits electromagnetic radiation having a frequency, which reads on the claim.

Regarding claims 18-21 and 36, Murasko '245 discloses the electroluminescent lamp comprising an organic light emitting diode. (Paragraph 0021)

Regarding claim 22, any material that transmits light and has a refractive index other than 1 reads on this claim. The glass disclosed in paragraph 0025 of Murasko '245 meets this limitation.

Regarding claims 23 and 24, a metallic substrate, as disclosed in paragraph 0025 of Murasko '245 would be reflective, and oriented to reflect light through the opposite surface of the device.

Regarding claims 25 and 26, the organic polymers listed in paragraph 0021 are fluorescent and luminescent.

Regarding claim 27, glass is a dielectric (Paragraph 0025).

Regarding claims 28 and 29, glass is smooth, while cardboard is textured. (Paragraph 0025)

Regarding claim 30, leads 214 (Paragraph 0027) are electrodes on the electroluminescent device, contacts to the power supply, and connection between both, meeting the limitations of the claim.

Regarding claim 33, Murasko '245 discloses using plural devices to provide a signal. (Paragraph 0028)

Relevant to claims 5, 10, 31, and 32, Murasko '245 teaches using the laminated devices for signs, billboards, or other illuminated designs or images. (Paragraph 0028) In a different embodiment, the reference also teaches signal receivers/transmitters as claimed (Paragraph 0036; microprocessor control) and a second EL lamp connected to the power supply, which can be illuminated at different times than the first lamp. (Paragraph 0037) Such a second lamp requires a separate, alternative power outlet (i.e. from battery) and inlet (i.e. to second EL lamp) as required by claim 5.

Murasko '245 also teaches using an adhesive on the protective surface or base sealing layer to affix the devices onto surfaces. (Paragraph 0028)

Regarding claim 1, Murasko et al do not explicitly teach a removable covering over the adhesive, flexible components as claimed, nor do they explicitly teach the thin film solar cell overlying the thin film battery. Regarding claim 16, Murasko et al do not teach a clear adhesive. Within the cited embodiment of Figure 2, Murasko et al does not explicitly disclose an alternative power inlet and outlet as claimed in claim 5, the transmitters and receivers claimed in claim 10, or the edge to edge assembly/lamination required by claims 31 and 32.

Curtin teaches providing solar cells having an adhesive layer over an outer protective surface, and a removable backing over a clear adhesive layer that allows the cell to be affixed to any desired substrate. (Figure 6; Abstract; Column 4, lines 16-19)

Murasko '716 teaches an electroluminescent device that is flexible. (Paragraph 0030)

Yamamura et al teaches reduction in the number of parts of a laminated solar battery device and simplified assembly achieved by disposing a charge storage device (Capacitor) on the non-light receiving surface of a thin-film solar cell assembly. (Constitution section of Abstract; Figure 1)

Regarding claim 1, it would have been obvious to one having ordinary skill in the art to modify the device of Murasko '245 by including a removable backing on the adhesive layer, as taught by Curtin, because a skilled artisan would have recognized the advantage of such a backing in that it allows easier handling of the devices prior to affixing on a surface. (i.e. no adhesion until desired, no need to apply an adhesive immediately prior to mounting)

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device of Murasko '245 by disposing the thin film charge storage device on the non-light receiving surface of the thin film solar cell, as taught by Yamamura, because Yamamura teaches that such a design reduces the number of parts required and simplifies the assembly of the device. (Purpose section)

Furthermore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device of Murasko '245 by selecting the flexible electroluminescent device of Murasko '716 as the required electroluminescent device, because Murasko '245 suggests using the electroluminescent devices of Murasko '716 for this purpose. (Paragraph 0030)

Based on the teachings of the prior art as applied above, all claim limitations are taught, except for explicit teachings of flexibility in the respective photovoltaic, battery, and circuitry, and overall device. It is the Examiner's position that thin film semiconductor, metal, and dielectric films that form the thin film photovoltaic and battery layers and leads 214 are "flexible" to a finite degree when disposed on the flexible substrates taught by Murasko '245. (i.e. they will flex to a certain extent before breakage) Accordingly, all claim limitations are deemed met by the prior art of record.

Specific to claim 16, it would also have been obvious to one having ordinary skill in the art to use a clear adhesive, as taught by Curtin, because it would allow adhesion of the device on the interior side of windows and the like, increasing the protection of the devices from damage while still allowing light to reach the solar cell and the light from the EL lamps to be visible from the exterior.

Regarding claim 5, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of the embodiment of Figure 2 of Murasko '245 by connecting a second lamp to a battery, as taught in Paragraph 0037 of Murasko '245, because it would increase the illumination provided by the

system and enable a wider variety of display designs powered by a singe cell/battery unit. Such a system would have lower manufacturing costs than two lamps powered by separate cell/battery units, providing additional motivation for such an arrangement.

Regarding claim 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of the embodiment of Figure 2 of Murasko '245 by using a computer to control the illumination performed by the system, because this would enable desirable complex illumination patterns, such as those described in paragraph 0036, for creative and attractive displays.

Regarding claims 31 and 32, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place plural adhesive devices of the embodiment of Figure 2 of Murasko '245 adjacent each other in making a sign, billboard or other display design, depending on what shape or design is desired. Adjacent placement of these devices reads on the limitations of these claims.

Response to Arguments

6. Applicant's arguments filed 9 August 2008 have been fully considered but they are not persuasive.

Applicant characterizes the substrates of Murasko '245 as substantially rigid materials. The Examiner respectfully disagrees, and notes that, e.g. cardboard, aluminum, and plastic substrates all have flexibility.

Applicant argues that Curtin does not supply the missing teachings to Murasko et al. The Examiner respectfully disagrees for the reasons cited above. Curtin teaches

the instant removable covering, and modification of the primary reference to include such a covering is considered to have been obvious for the reasons given.

Applicant argues that Yamamura is rigid and does not include a flexible thin film battery layer. The examiner again respectfully disagrees, for the reasons given above. It is the Examiner's position that thin film photovoltaic, thin film battery, leads 214, and the overall device are "flexible" to a finite degree when disposed on the flexible substrates taught by Murasko '245.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Jeffrey T. Barton whose telephone number is (571)272-1307. The examiner can normally be reached on M-F 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nam X Nguyen/
Supervisory Patent Examiner, Art Unit 1753

JTB
14 November 2008